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TITLE: INSPECTION METHOD FOR WIRING BOARD  
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ABSTRACT:

PURPOSE: To allow accurate inspection of conduction and impurities by irradiating one point of a wiring pattern with an electron beam while another point with a positive ion beam and then detecting emitted electrons.

CONSTITUTION: In the inspection of a wiring pattern 5 on

a wiring board 4,  
one point of the wiring pattern is irradiated with an  
electron beam generated  
from a generating means 1 while a different point is  
irradiated with a positive  
ion beam generated from a generating means 2 and then the  
quantity or energy of  
electrons emitted therefrom is measured through a detecting  
means 3. When the  
wiring is conducting, potential drop due to the electron  
beam is offset by  
potential rise due to the positive ion beam to keep the  
potential on the wiring  
pattern 5 constant thus increasing the secondary electron  
emission quantity as  
compared with nonconducting state. Consequently,  
discrimination can be made  
between conduction and nonconduction. Furthermore, Auger  
electrons are also  
emitted. Since the energy thereof is determined depending  
on the combination  
of target substance and the type of particles used in the  
irradiation, the  
impurities are detected and the substance is specified  
based on the measurement  
of energy.

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